

holding a metal sample, as described below, so as to cool the electrodes. FIG 3 is a cross-sectional view of an exemplary pretreatment apparatus including the cooling device. The anodes 1 include metal plates 7 as the counter electrodes of a metal sample. The metal plates 7 are cooled by running cooling pipes 42 in a wall body 41 of the sample chamber 5 that supports the metal plates 7. The metal plates 7 are arranged at top and bottom wall surfaces, sandwiching a cathode therebetween. However, in some embodiments, it is preferable to provide metal plates 7 at four wall surfaces, including left and right wall surfaces. Further, in some embodiments, it is preferable to provide an anode at six wall surfaces of the sample chamber 5, thus more evenly cleaning the surface of metal samples. Other structural characteristics of the pretreatment apparatus are basically the same as those of embodiments described above. In this example, the sample input port 24 has a slide gate 27 and a cylinder 29 to shift the slide gate 27 right and left to open and close the sample input port 24.

IN THE CLAIMS:

Please replace claims 15, 16 and 17 as follows:

15. (Amended) An analyzing apparatus for element analysis of a metal sample, comprising:
- an anode for holding a metal sample;
 - cathodes arranged to counter the anode for sputtering;
 - a pretreatment chamber for storing the anode, the cathodes and the metal sample under an inert gas atmosphere;
 - a cooling device for compulsively cooling at least one of the cathodes or the anode;
 - a reaction chamber, connected to the pretreatment chamber through a shutter, for heating the metal sample; and

a detector for detecting trace elements given off by the heated metal sample.

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16. (Amended) The analyzing apparatus according to claim 15, comprising a plurality of the cathodes arranged to counter the anode, and the cooling device cools at least one of the cathodes.

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17. (Amended) An analyzing apparatus for element analysis of a metal sample, comprising:

a pretreatment chamber having means for removing contaminants on the surface of the metal sample by sputtering;

means for cooling at least one electrode for sputtering; and

a reaction chamber connected to the pretreatment chamber having means for heating the metal sample and means for detecting trace elements given off by the heated metal sample.

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Please add new claim 18 as follows:

--18. The pretreatment apparatus according to claim 13, further comprising:

a reaction chamber, connected to the pretreatment chamber through a shutter, for heating the metal sample; and

a detector for detecting trace elements given off by the heated metal sample.--

REMARKS

Claims 1-18 are pending herein. By this Amendment, the specification and claims 15, 16 and 17 are amended, and new claim 18 is added. No claims are canceled. Support for the amendments of claims 15, 16 and 17 can be found in the specification, for example, at page 4, lines 15-20. Support for the specification amendments can be found in Figs. 1-3. Thus, this Amendment does not introduce new matter.

The attached Appendix includes marked-up copies of each rewritten paragraph (37 C.F.R. §1.121(b)(1)(iii)) and claim (37 C.F.R. §1.121(c)(1)(ii)).